

**ABSTRACT****Visual Attention System**

This invention identifies the most significant features in visual scenes, without prior training, by measuring the difficulty in finding similarities between neighbourhoods in the scene. Pixels in an area that is similar to much of the rest of the scene score low measures of visual attention. On the other hand a region that possesses many dissimilarities with other parts of the image will attract a high measure of visual attention.

10 The invention makes use of a trial and error process to find dissimilarities between parts of the image and does not require prior knowledge of the nature of the anomalies that may be present. The method avoids the use of processing dependencies between pixels and is capable of a straightforward parallel implementation for each pixel.

15 The invention is of wide application in searching for anomalous patterns in health screening, quality control processes and in analysis of visual ergonomics for assessing the visibility of signs and advertisements.

The invention provides a measure of significant features to an image processor in order to provide variable rate image compression.

20 (Figure 1)